IMPACT OF ISRAELI MEASURES ON PALESTINIAN CHILD LABOR AND SCHOOLING

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Abstract

The objective of this paper is to study the determinants that make the Palestinian children decide to choose schooling, working or both. In addition, this paper aims to study the impact of the Israeli aggression (since October 2000) on children as well as on children's decision to take one or more of the above-mentioned paths. In this paper we use the sequential-response models method. In each case, the probit method to assess the model for each decision is used. The Quarterly Labor Force Household Survey database of the Palestinian Central Bureau of Statistics was used covering the second and third quarters of 2000 and 2001. Results show a negative effect in the children's growth because of Israeli repression against the Palestinian people and the intensity in the risks that the children take in their attempt to help their families earn their living, especially after the increase in the poverty and unemployment more recently. The increase in the probability for the boys to go to work and for the girls to leave school are among the indications of this.

1. Introduction

The adoption of convention 182 (against the "worst forms" of child labor) by the International Labor Conference in June 1999 is commended for the increasing attention it has directed to child labor worldwide. This new international human rights instrument reaffirmed previous ILO provisions on minimum age for admission to the labor market as well as Article 32 of the Convention on the Rights of the Child (CRC)[1], which stresses the need for immediate child protection against economic exploitation (MOPIC & UNICEF, 2000).

Nevertheless, the proper growth and development of a quarter billion children in developing countries is still at stake. Available ILO figures point to over 120 million children (aged 5-14 years) employed on a full time basis and an additional 130 million employed on a part time basis (Ashagrie, 1993).

Graveness of child labor is contingent to the impacts it leaves on child development. Adult oriented jobs might be extremely harmful if performed by children. As a matter of fact, many aspects of child development are adversely affected when child labor involves exploitation including: Physical development (e.g. general health, biological harmony, strength, sight, hearing, etc.); cognitive development (the ability to read, write and calculate, acquire knowledge, etc.); emotional development (self-esteem, family ties, feeling of love, recognition by others, etc.); and social and moral development (feeling of belonging to a group, ability to cooperate, ability to differentiate between what is right and what is wrong, etc.) (Kafri, 1999). Thus, it is essential to minimize the drastically adverse effects child labor leaves on human capital development and on future growth of developing countries.

Most empirical work on the incidences and determinants of child labor highlights the role of school attendance, despite the solid belief that school attendance is not the "inverse" of child labor (Grootaert, 1998). Nevertheless, much of this literature views schooling as the most important means of drawing children away from the labor market (Siddiqi and Patrinos, 1995). Nevertheless, most studies on Palestinian child labor are descriptive statistics that lack solid analytical foundations, especially after the inception of the current crisis in the Palestinian

Territory (PT). The aim of this paper is to carry out an analytical survey that attempts to influence policy and prevailing realities.

The PT witnessed an increasing public concern for child labor as a result of macro socioeconomic changes. More visible forms of child work on the streets and in more formal labor markets are drawing attention to the exploitative and harmful aspects (MOPIC & UNICEF, 2000).

The PT has been facing exceptional peculiarities. Upon occupation of the PT in 1967, Israel opened its labor market to the Palestinian labor force with a total disregard for academic qualifications. Palestinian workers who were unskilled gained higher compensation than the wages of skilled laborers in the local market[2]. Therefore, the returns for schooling became very much less rewarding relative to working in Israel. This situation influenced the Palestinian child views of future career path, schooling versus child labor, especially work in Israel.

Everything was turned up side down by October 2000. The Israeli military occupation authorities imposed strict restrictions on the movement of Palestinians within the PT and between the PT and Israel, coupled with complete closures, curfews and military incursions. Almost 316,000 Palestinians became unemployed in the last quarter of 2000 as compared to 170,000 in the third quarter of the same year (PCBS, 2001). Most people who were working in Israel became jobless and faced the bitter reality (loss of work and education). This situation, caused children to reconsider their view of education and training, which motivated the researcher to examine the direct and indirect impacts of the Israeli measures on the Palestinian children.

The next section describes data sets, sources, and methodology. It also sheds light on the data compilation mechanism and rationale. The following section includes relevant tabulations on child labor and school participation trends in PT based on data available on children aged 10-17 years[3]. Section four presents the econometric model used in this paper to analyze the probability of choice and trade off child schooling with labor in PT. Section five discusses the results of the econometric model. The last section states some policies on how to minimize child labor and school drop out rates an essential step for the Palestinian growth.

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[1] CRC-Article 32: (1) States Parties recognize the right of the child to be protected from economic exploitation and from performing any work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral or social development. (2) States Parties shall take legislative, administrative, social and educational measures to ensure the implementation of the present article. To this end, and having regard to the relevant provisions of other international instruments, States Parties shall in particular: (a) Provide for a minimum age or minimum ages for admission to employment; (b) Provide for appropriate regulation of the hours and conditions of employment; (c) Provide for appropriate penalties or other sanctions to ensure the effective enforcement of the present article. (MOPIC & UNICEF, 2000)

[2] The average daily wage (ADW) for Palestinians working in Israel and Israeli Settlements was USD 26 as compared to USD 15 for those working in the PT in the 3rd quarter of 2000 (before the last crisis). In addition, the ADW for those who work in the PT and have 13 years and over of schooling is 19 US$ (PCBS, 2001).

[3] To analyze the data through two periods, I used the available data on children aged 10-17 years. Also, there are few children aged 5-9 years working in the PT (the percentage reach to 0.8 percent as a percentage of all children in the same age).

2. Data

The main data source of this paper is The Palestinian Labor Force Survey (PLFS)[4], a quarterly survey that has been conducted by the Palestinian Central Bureau of Statistics (PCBS) since October 1995. The PCBS has been compiling data (via PLFS) on persons aged 10 years and over instead of 15 years and over since 1999. The sample size of PLFS for one round was 7,559 households, about 6,800 households of which were completed. About 3,500 of those completed included at least one child aged 10-17 years, (about 9,000 children in each round). This paper made use of five PLFS rounds covering the period from the second quarter of 2000 (prior to the outbreak of the Al-Aqsa Intifada[5]) to the third quarter of 2001. The findings of these rounds made it possible to undertake a thorough comparative analysis of a number of selected variables.

As for the econometric analysis, four PLFS rounds were merged to generate two new variables, one variable is to compare pre and during Intifada periods. The second variable aims to compare child work during the period of school attendance with during the summer holiday.

In this paper, the term "employed child" refers to every child (aged 10-17 years) who worked and was remunerated for at least one hour during the reference week, or who has been working as an unpaid family member for at least 15 hours during the reference week. The reference period changes when we show the figures from the Child Labor Survey (CLS) 1998, and becomes at least one week during the reference period (the previous 12 months, starting October 1997), whether as a paid employee or unpaid in a family-owned enterprise, or through self- employment.

3. Trends and Statistics

3.1 Children Characteristics

About 1.7 million Palestinian children (0-17 years) in the PT were born under a foreign illegal military occupation that has been denying them basic and natural rights, including the right to proper education. Children constitute 19.3 percent of the total population, that is, 638,000 of whom 313,000 are female. More than half of these children live in urban communities. One fifth live in crowded refugee camps.

The outbreak of the latest Israeli attack on September 28th 2000 has inflicted a wide-scale calamity upon the Palestinian people in the PT, but surprisingly induced a significant cut in school drop out rates among Palestinian children.

This rate fell from 10.9 percent in the third quarter of 2000 to 8.6 percent in the third quarter of 2001 among children aged 10-17 years. Likewise, the percentage of economically active children (employed and unemployed) dropped from 7.0 percent to 3.2 percent in the same period. This regression is largely attributed to the collapse of a considerable number of businesses and workshops that used to absorb child labor. This relation emphasizes the fact that much literature views schooling as the most important means of drawing children away from the labor market (Grootaert, 1998, p2).

More than 60 percent of Palestinian households fell below the poverty line during the crisis relative to 21 percent before the crisis (PCBS, 2002(a)). Literature tackling the relationship between poverty and child labor supports the fact that it was found that in the case of the increase in school attendance and the decrease in the child labor that the number of the poor families sharply increases. This explains the special situation in the PT. The increase in the number of poor families is a result of an Israeli policy which intentionally aggravates the situation in the PT through the separation of towns and cities and the closure of passages with the outside world, in addition to the curfew imposed on the population which resulted in a bad economic crisis, a sharp increase in the number of poor families, and a rise in the unemployment which triplicates after the start of the crisis. All of the abovementioned reasons prevented the children from searching for work, particularly when opportunities are few.

3.2 The Characteristics of the Employed Children

In this section, only the children who worked for at least one hour as self employed or wage employees, or unpaid family members who worked for at least 15 hours during the reference period were discussed. More light is shed on the prominent characteristics of the employed children and the changes that took place between the third quarter of the year 2000 and 2001 in order to compare the situation in the period that preceded the crisis in the PT and that during the crisis, taking into consideration the summer holiday.

The phenomenon of child labor is basically specific to male children who comprised 94.1 percent of the total child labor between 10-17 years of age in the third quarter of 2001, rising from 92.1percent on the eve of the crisis (third quarter 2000). Most of the employed children fall within the age 15-17 years to form 81.3percent of the total employed children of the age 10-17 years. The children who mainly and positively were affected by the crisis were those who belonged to the early age categories. The percentage of the employed children who belonged to the age category of 15-17 years rose from 70.5 percent to 81.3 percent in the period between the third quarter of the year 2000 and 2001.

The percentage of the children in the urban and rural areas is about the same (40.6 percent and 46.5 percent respectively), whereas the percentage of the employed children in the refugee camps was 12.8 percent in the third quarter of

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[4] For more information about PLFS, please visit : http//www.pcbs.org/inside/selcts.htm

[5] Al Aqsa Intifada is the Palestinian revolt against the Israeli occupation, which started on 28th September, 2000.

2001. In comparison with the third quarter of 2000, it could be noticed that a drop in the percentage of the employed children in the urban areas took place at the expense of other areas.

During school time, (the second quarter of 2000), those children that were studying and working at the same time, constituted 28.3 percent of the employed children. This percentage rose during the summer holiday (third quarter of 2000) to reach 44.7 percent. After the beginning of the crisis in the PT, this percentage returned to the average, which spread through school time and maintained that average and did not retreat despite the school holiday.

One of the most dangerous places for the Palestinian children to work in was Israel and the Israeli settlements where he/she may gain bad habits and manners. 16.7 percent of the employed children worked in such places in the third quarter of 2000. This percentage dropped after the Israeli closure to become 6.7 percent. Lately, it rose again to become 10.2 percent during the third quarter of 2001. The children who continued their work in Israel during the Israeli invasion to the PT were exposed to high risks during their attempts to infiltrate to these areas. This situation shows the bad need of these children to the work even it may cost them their lives. There are many incidents in which Palestinian children were killed. Despite the drop in the percentage of the employed children during the Israeli invasion, the previous indicator shows the difficulty of the situation in which the Palestinian children found themselves. This situation was bad enough to force the children to risk their lives to earn a living.

Work in certain sectors such as services, selling and farming rose sharply after the invasion at the expense of other sectors like professions and handcrafts. This indicates that children had maintained their work with their families in both the agricultural and commercial sectors.

The long working hours of children is of deep concern. Children some times work as long as 40 hours per week for 11-12 U.S. Dollars per day while adults receive 16-18 U.S. Dollars.

It has been noticed that the number of employed children dropped. This drop gives a false positive indication. The facts show that employed children work in dangerous environments, in jobs that negatively affect all aspects of their growth. These children who left work, did not do it willfully but because of the closure of the territories, which resulted in the closure of the enterprises where these children were employed.

3.3 The Characteristics of the Employed Children's Households

The size of the household where children who work grow up is usually large (9.1 persons) in comparison to the average size of the Palestinian household (6.9 persons). These figures conform to the literature on the subject. The average age of the father of the family where one of the children works is 47 years, while the general average is 32 years. The average years of study is not more than 7.2 years during the survey period, while the general average is about 8 years. It is worth noting that no radical change in the abovementioned figures took place before or during the crisis with one slight exception, that the average number of years of study for the fathers rose from 7.1 years in the third quarter of 2000 to 7.6 years for the same period in 2001.

The children who belong to low-income families are badly affected. This shows the strong relation between the damage that the Palestinians suffered during the Israeli invasion and its effect on the Palestinian children. The average wage of the head of the household started to drop from 18.3 U.S. Dollars at the beginning of the crisis to 14.5 U.S. Dollars in the third quarter 2001. This confirms the fact that the number of the employed children has shrunk because of the tight closure of the territories. This situation forced the children to risk their lives in search for work because of the pressing need of their families. Therefore, some of the children had to continue working in Israel despite the risks.

3.4 Child Labor Dynamism

In this section the nature of dynamism that happened to the children 10-17 years in the period between the school holiday, which preceded the Israeli invasion, and the holiday that followed during the invasion is going to be discussed. No change in the status for 92.5 percent of the children is noticed whether the child was attending school, working, working and studying, housekeeping, or doing none of the above mentioned but was unable, disabled, or idle. 2.4 percent of the children left schools while 3.1 percent went back to schools. Moving to or from the idle status remained about the same (2.0 percent). Overall, the economic and educational situation of 7.5 percent of the children changed during the period before and during the invasion.

3.5 The Impact of Israeli Measures on Children

The exceptional situation in the PT leads to contradictions in the prevailing conceptions and theories. A lot of literatures indicate to the direct relation between poverty, child labor, and schooling. (Canagarajat and Coulombe, 1997; Grootaert, 1998; Ray, 1999). The comparison of the figures during the period that precedes the crisis with those during the crisis shows a contradiction with those concepts. The number of the poor families increased. The number of the children who joined schools increased while the number of the employed children decreased. This information does not reveal any improvement in the situation of the child labor in the PT during the Israeli actions against the Palestinians since October 2000. On the contrary, the situation deteriorated. The lack of job opportunities for both adults and children proves this conclusion.

According to the child labor concepts, there is a category of these children whose work does not contradict with children's rights as long as the aim of child labor is to save his family. The results of the child labor survey in the PT in the last quarter of 1998 indicated that more than half of working children do work to increase their family income. Therefore the Israeli measures hurt one of the resources of the family income. More than half of the families are in a bad need for their children's work despite the dangers.

One of the most important reasons for a higher school drop outs is the students' self-ability to learn as it has been indicated by the child labor survey conducted in the last quarter of 1998. This survey showed that 72 percent of the male children left schools either because of their failure or the hatred of school. Causes of drop out among female pupils/students include marriage (22 percent), lack of interest in education, the families' decision (20 percent for each), or failure (17 percent). These results dismiss any role for the economic factor in school drop out. They also indicate that the education sector is supported by the Palestinian National Authority (PNA), bearing in mind that education is free for at least the first 9 years for refugee camps population and for those who have a refugee card issued by the UNRWA. This explains the impact of the Israeli measures against the Palestinian people and indicates that the relationship between poverty and education is not significant as poor families could send their children to schools almost for free. It also shows that the high percentage of the children who joined schools during the crisis period can be attributed to a moral motive and to the fact that the only option that the children had was to join school rather than stay at home following the many closures that took place against the populated areas. Certainly, the motive was not the raise in income because of the rise in the percentage of the poor.

Child nutrition status is another area drastically affected by the ongoing Israeli measures. Recent results indicate that about 46percent (252,000) of children aged 6-59 months suffer from chronic malnutrition. A comparison with available statistics for summer 2000 reveals a serious increase in the number of children suffering from moderate stunting (23percent), moderate underweight (36percent) and moderate wasting (50percent). Also the results show that about half of the children aged 6-59 months suffer from anemia (below the mean of hemoglobin level), 44 percent in the West Bank compared to 55 percent in the Gaza Strip (PCBS, 2002).

This happened because about 64 percent of the Palestinian families had no access to food supplies due to the siege (85 percent of the families), loss of family income (56 percent of the families) and curfew (31 percent of the families).

These indicators help one to understand the dynamics of life in the PT. The results formally contradict with expectations. While they are worse than expectations, regarding the question of child labor and its effect in lowering the poverty size in the PT, there is some literature that discusses the benefits that some families get form child labor despite the contradiction with child rights. Therefore, acting as a mechanism that balances between the disadvantages of child labor and its negative results on the child, and the problem of need and poverty.

4. The Econometric Model

4.1 The Determinates of the Model

As mentioned above, available literature on child labor points to several critical supply and demand factors. The following analysis below focuses on supply factors at the household level, that is those characteristics of the child and the household which can exercise an influence over the household's decision to allocate children's time away from schooling and towards work (Grootaert, 1998). We also include the impact of Israeli measures on the PT. We estimate the demand factor from the number of unemployed persons in the household, which helps us understand the capacity of the Palestinian labor market, especially after the last closure. This indicator can be measured by using the number of adult unemployment in every household and the wages for the head of household and comparing between the two periods (before and through the closure).

4.2 Characteristics of the Child

The descriptive presentation in the previous section, as well as virtually all empirical work on child labor, has indicated that the age and gender of the child are important determinants of the probability of work. The magnitude and direction of these effects are however country-specific, and determined by cultural factors, labor market opportunities, and wage patterns.

4.3 Parents' Characteristics[6]

Most of the literature shows the education and employment status of the parents as an important influence on the child labor and schooling decision (ILO, 1992; Grootaert, 1998; Canagarajah and Coulombe, 1997; PCBS, 1999). "The usual assumption is that the father's education and employment affects boys the most, and mother's education and employment affects girls the most" (Grootaert, 1998). Years of schooling are included in this model. Likewise, parents labor force characteristics are important as stressed by most empirical studies. Grootaert (1998) says that "If the parents have no or irregular employment, it creates the need for additional income sources to be provided by children." It is important to examine these effects on the Palestinian children especially in the last crisis.

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[6] We assume the head of the household is one of the parents

4.4 Household Characteristics

The literature has clearly established that several demographic and economic features of the household as a unit affect the supply of child labor (Grootaert, 1998; PCBS, 1999; Ray, 1999; Ravallion and Wodon, 1999; Wahba, 1999). Grootaert summarized the influence of household characteristics on child labor on two levels; the first is the demographic level, which includes the household size and composition, the number of children by gender and age. "The more children there are in the household, the more likely it is that one of them will work" and "A larger household size decreases income per capita and increases the dependency ratio, and both factors increase the likelihood that a child will need to generate income (in cash or in kind) to maintain the household's level of living" (Grootaert, 1998, p28). Also, the demographic level includes the age of the head of household, which explains the life cycle, and finally, the gender of the head of household. In the model below, the variables that capture the household size and the number of rooms are entered. The density of the household, which combines both of the previously mentioned variables, describes how they both indirectly affect schooling and child labor.

The other level is economic. It includes household ownership of income generating assets (a farm or other household enterprises). As these indicators cannot be derived from available data, impacts of household enterprises were obtained from other variables like mother employment status and community type (rural) and if there is at least one self-employed family member.

For the special case of the PT, an additional variable, the number of adults unemployed in the household was added. This indicator is very important because it describes the economic fluctuations and their effect on child labor and schooling.

Furthermore, people from areas of Palestine occupied in 1948 live in refugee camps in the PT. They have a different service from United Nations Relief and Work Agency in the Near East (UNRWA). They go to UNRWA schools and pay symbolic fees due to their deteriorating living conditions. This category of the Palestinian people should receive exceptional attention in addressing with the negative impacts of these conditions on child labor and schooling.

4.5 The Impact of Closure

"Currently seven of the eight major Palestinian cities in the West Bank, including refugee camps and surrounding communities, are under a strict Israeli military curfew. This means that almost two million Palestinians in the West Bank are confined to their homes, with heavy Israeli military machinery in place to impose the curfew. No one knows ahead of time when the Israeli army will lift the curfew for a few hours, and only then can people leave their homes, still risking their lives however" (Habibi, 2002). This is the situation in the PT. In this paper,

we deal with this condition and add an additional variable to test the effect of the impact of Israeli measures on child labor and schooling and an independent variable as a dummy variable comparing between two periods (before and through Al Aqsa Intifada).

4.6 The Model

The estimation method analyzes the determinants of child labor as a sequential-response model (SRM) using three binary probit models, discussed in Maddala (1983). SRM consists of the following series of binary decisions (Grootaert, 1998):

P_1 = probability to go to school and not to work.

P_2 = probability to go to school and to work.

P_3 = probability not to go to school and economically active.

P_4 = probability not to go to school and not economically active.

In the sequential probit model *(discussed in the appendix)*, we can write the probabilities as follows:

$$P1 = F\left(\beta'_1 x\right) \tag{1}$$

$$P2 = \left[1 - F\left(\beta'_1 x\right)\right] F\left(\beta'_2 x\right) \tag{2}$$

$$P3 = \left[1 - F\left(\beta'_1 x\right)\right]\left[1 - F\left(\beta'_2 x\right)\right] F\left(\beta'_3 x\right) \tag{3}$$

$$P4 = \left[1 - F\left(\beta'_1 x\right)\right]\left[1 - F\left(\beta'_2 x\right)\right]\left[1 - F\left(\beta'_3 x\right)\right] \tag{4}$$

Where F represents the standard normal distribution function, ß's are vectors of the model parameters. The vector x contains the explanatory variables as we show above. The parameters ß1 were estimated from the entire sample by dividing it into two groups: go to school only and otherwise. The parameters ß2 were estimated from the sub-sample of non attendance a school only by dividing it into two groups: go to school and work, and not attending school. The parameters ß3 were estimated from the sub-sample of not attendance school by dividing it into two groups: economically active and not economically active. In each case the binary models estimated by the probit method.

We do not analyze the data on the children who work as wage employees because there is not enough observation. Also, as a special case for the PT, we use the definition of the economically active children as ILO's definition (employed and unemployed children), because the children who search for a job, mean that they need to work but the demand of the labor market is weak. Through the crises, the labor market collapsed and it could not absorb more

workers from both groups (children and adults). It is important to understand the determinants of the economically active children aged 10-17 years. This group of children is taken because, as we mentioned above, the percentage of working children of 5-9 years is 0.8 percent of all children of the same age.

5.Empirical Results

Table 2 shows the sequential probit results for the determinants of the probability to go to school and not to work, the determinants of the probability to go to school and to work, and the probability to work only. The first column contain the marginal effect of the estimates (in percentage), which shows the change in probability, due to a one-unit increase at the mean of a given explanatory variable, while holding all other variables constant at the mean The second column contains the standard error.

In the first part of the analysis, which has to do with the probability of joining school only, the results showed a strong and significant effect for the age and gender of the child. The age showed a negative effect. One more year in the age would increase the probability of school deserting by 3.8 percent. This result is logical and in harmony with previous studies. Girls' probability to join school is 4.9 percent more than that of the boys. The Intifada had a negative and significant effect on the younger children. The probability of these children learning has increased. The girls were also affected. Their probability of joining school increased by only 3.6 percent over that of the boys. This means that girls started to leave school during the Intifada, this forms a negative indicator as an outcome of the late crisis.

Householder gender, employment status, age and level of educational attainment are insignificant as is mother employment status. The older the head of the household, the more likely it is that the child will be attending school and not working.

Parent's education has an approximately similar positive influence on child education. The relationship of the mother with the labor force is one of the amazing results of the family characteristics on the children's education. These results showed a negative and significant effect for the mother's work on her children's education. The employed mother decreases the probability of her children's school attendance by 4.1 percent in comparison with others. But there are several studies that show opposite results. It is worth mentioning that the percentage of women working as unpaid family members is 41 percent and the percentage of the women who work in the agricultural sector is 38 percent (third quarter 2000). This explains the adverse relationship with education. When most of the mother's work is in the home, and therefore the mother is around the children, this, subsequently, positively affects their educational development.

The Intifada has significantly affected some of the determinants of the family's characteristics. The relative effect of the father's education on the children's education fell from 0.6 percent to 0.4 percent. This result is attributed to the financial need of the family, which affects the family plans of its children's education. At the same time, the mother's education positively affected the children's education, while her work negative effect on the children's education, which fell from 4.1 percent to 2.9 percent from before and throughout the Intifada. This drop could be attributed to the direct influence of the Intifada on the family businesses, many of which were closed. These effects resulted in a drop in the percentage of women working as unpaid family members to 26 percent. The percentage of the women working in the agricultural sector dropped to 27 percent during the Intifada (second quarter 2001) compared to the abovementioned data. This forms another explanation for the cause of the negative influence of women's work on the education of their children. Family businesses have a negative and significant effect on the increase of the probability of the child to leave school. On the other hand, it explains the negative effect of the economical crisis on the family enterprises, most of which were closed. The rest of the determinants of the family characteristics were not significantly affected. The above-mentioned shows the negative effect of the economical crisis on the child labor and education phenomena. Among the negative aspects of the crisis is the sharp raise in the unemployment averages, which confirms the fact that unemployment affects the increase in probability of a child leaving school. But the analysis gave good results, which showed that there is no significant influence of the number of unemployed adults in the family. It is likely that this result can be explained through other factors in the model. One of the most important of these factors is the dummy variable of Intifada.

The house density has an adverse and significant effect on the probability of children joining school. The Intifada did not affect this variable. The number of children (0-17 years) in the family had a negative and significant effect on the probability of their school attendance taking into consideration the fact that the effect of these characteristics is not large in comparison with other factors. This result confirms the negative effect of the household size on child labor and education. The household size is one of the characteristics of poverty. The poverty report (1998) shows that 73 percent of the poor Palestinian families include more than five members taking into consideration the average Palestinian household size of seven persons (1997 estimates). The bigger the household size, the more poor families we will have (MOPIC, 1998).

As far as the locality type, the analysis showed that the probability of school drop-outs in the rural areas or in the refugee camps is greater than in other localities. The poverty report indicates that the highest poverty rate exists in the refugee camps (33 percent) followed by rural and then urban areas (20 percent

each). It is surprising that school drop outs in the Gaza Strip decrease despite the high unemployment and poverty rates if compared to the West Bank. This could be explained by the fact that most children in the Gaza Strip are enrolled in UNRWA and governmental schools at a minimal cost. Gaza Strip is a closed and fenced area, which discourages children to quit schools for work in Israel. The Intifada affected these determinants. Rural areas were affected significantly and adversely. The probability of drop-outs in the rural areas before the Intifada was the opposite of school attendance, which rose by 0.2 percent in comparison with other areas, where the same probability was 0.5 percent less. This gives another interpretation for the negative effect on the family enterprise through the Intifada. The situation in Gaza Strip changed completely. The effect became significant and negative on the education, the probability of joining school for the child who lives in the Gaza Strip increased 1 percent more than that of the West Bank children where the probability of them joining school dropped by 0.3 percent.

The second stage of the analysis, which is concerned with the determinants of work and education together showed that most of the factors have a significant effect. The effects of the characteristics of the child were in conformity with most of the previous studies, for example, the age of the child has a positive and significant effect. For each year increase in age the probability of a child deciding to work and go to school decreases by 1.5 percent. Also, the probability of a girl to combine studying and working is 10 percent less than that of the boys. This is a logical result and was not affected by the Intifada. But the age factor was affected during the Intifada. The probability of combining working and studying dropped, and younger children started to have a stronger tendency to work during the time they attend school.

The analysis of these results indicates that the head of the household and the mother of the child have a significant impact on the probability of taking the decision of combining work and education. The probability of combining work and education by the children who belong to a family headed by a woman increased by 3.5 percent. This percentage doubled to 7.4 percent during the Intifada. This increase could be explained by the serious need for a source of income by such families. Also, the older the age of the head of the household the stronger the probability of the child combining work and education. The analysis showed a direct effect for the education of both the head of the household and the mother on the work of their children. But the effect of the work of the head of the household and the mother is stronger than that of the education level. This means that the probability of the child of a working head of household to combine work and education increased by 3.6 percent in comparison with others. At the same time, the working mother increased the probability of her child to combine work and education by 9.1 percent in comparison with others, while the education of the head and mother increased the probability by 0.6 percent and 0.2 percent respectively. During the Intifada, the work of the mother increased the probability of her children to combine work and education to 11 percent, which is relatively high in comparison with other determinants.

The number of the unemployed household members, as a variable, registered an adverse effect. Whenever the number of the unemployed adult members of the family increased, the probability of the children to go to work or to become idle increased by 2.1 percent. There was an insignificant effect for those children aged 10 years or less, while those children aged above 10 years had a direct and significant effect. Although this effect was relatively small. In general, the household density had an adverse effect. The greater the density, the stronger the probability for the child to work or to become idle.

The probability of rural children combining work and education is 3 percent more than in other locations. The previous results emphasize this fact. This could be due to the availability of household enterprises and therefore the opportunities for children to work without deserting school. The laws in the PT do not prohibit children from working with their families to help out or to gain experience because in this case the child is working for people who care for him. The probability of the children who live in Gaza Strip to combine work and education is 4.2 percent less than that of the children who live in the West Bank. This has a significant effect. The last factor was strongly affected during the Intifada. The probability of the children who live in Gaza Strip to choose to combine work and education was 0.9 percent less than that of the children who live in the West Bank. This result is infers the direct influence of the Intifada on the West Bank and to the rise in the number of days of closure and curfew against the different communities.

The third stage of the analysis which was related to the probability of work only, showed that the older the child is the greater the probability will be for him to work. Girls, however, have a 56-percentage point lower probability of going work than boys. This means that girls have stronger tendency to stay home and get engaged in home care tasks. As far as the gender and the age of the head are concerned , they proved to have no significant effect. These results are in harmony with other research (Grootaert, 1983). Wherever the years of education of the head of the household increase, the probability of the child to work only decreases by 0.9 percent, while this probability increases by 3.5 percent in the case that the head of the household was working. The Intifada affected the characteristics of the head of the household. The effect of the education of the head of the household decreased whereas the effect of the education more than doubled. Therefore the probability of the head of the household to work increases the probability of the child to work only by 9.4 percent in comparison with others.

The analysis did not show a significant effect for the mother's education, while it showed a direct and significant effect for the mother's work. A working woman

raises her child's probability to work and stay away from home by 17.7 percent. It is worth noting that the work of the women had a very strong influence on the decision taken by her children as to whether he/she should choose education or work. Taking into consideration that the work Palestinian women usually do is unpaid. In addition, Palestinian women mainly work in the agricultural sector were most of the household enterprises exist, as was previously mentioned. But if the phenomenon was strongly related to the work of women in these enterprises, then the work of children could be fine without affecting their health or growth. This could be shown in the household enterprises.

Unemployment among household members raises the probability of the children to stay home or to become idle. Wherever the number of the unemployed adults rises, the probability of the male children to become idle or the girls to get engaged in home care tasks increases by 7.7 percent. This is an indicator of the ability to absorb the labor force. The increase in the number of the unemployed persons means that the labor market is not able to absorb more labor force, which results in the decrease of the probability of creating more jobs for both adults and children. No significant effect was shown for the household density or for the number of children in the household.

The probability of becoming idle for the male children or for the girls to perform household tasks increases in the refugee camps. Factors like house density and poverty, which strongly exist in the refugee camps force children to become idle. The probability of the children who live in refugee camps to choose to work only is 6.3 percent less than those who live in other places. At the same time, the probability of the children who live in the Gaza strip to choose to go to work decreases by 7.1 percent in comparison with the children who live in the West Bank. The high unemployment rate in the Gaza Strip and the failure to go to work in Israel because of the completely closed borders is one of the reasons behind that decrease. The Intifada raised the probability of male children to becoming idle and girls to getting engaged in home care tasks to 11.8 percent. In short, it appears that child labor is significantly influenced by the age and gender of the child. This result coincides with the results of other studies on the subject. In general, there is a significant influence of the work of the mother on the work of their children, which raises the probability that their children will choose to work and stay away from school, or to choose to combine both. The education of the mother and head of the household positively affects the children education. The number of the unemployed adults in the family has a significant influence on the probability of combining work and education or to work only. This factor has the effect of attracting boys to become idle and girls to stay home and get engaged in housekeeper tasks without education. This is a clear negative effect.

The house density and the number of the children have a significant effect on choosing education or combining education and work together. At the same time,

these factors have no effect on the decision to work or not. Most of the time, the kind of the community of the child whether it is rural, urban, or a refugee camp has a significant effect on that decision. Rural communities direct their children to go to work whether he attends school or not. The probability of the children who live in Gaza Strip to choose education is more than that of the children who live in the West Bank. This is a significant effect despite the high unemployment and poverty rates there. During the Intifada, many of the abovementioned determinants were significantly affected. These effects were described as negative. An example for this negative influence is the increase in the probability of the younger children leaving school and going to work.

6.Conclusions

Child labor in the PT is not a critical problem from a quantitative point of view if compared to other developing countries but fears emanate from the kinds of work that the Palestinian children are engaged in. Hard and risky work conditions endanger the lives of these children and threaten present and future child growth potentials. Dealing with such a phenomenon requires care and patience. One of the most common kinds of work that Palestinian children do is in Israel and in the Israeli settlements where they may work under the blazing sun or inside greenhouses. Typically, they leave home around 4 o'clock in the morning and return in the afternoon. During the Intifada, the situation became worse to the extent that some of children had to walk or to take a bike to get to work. In the case of being discovered by Israeli soldiers they will be arrested and possibly subjected to torture for days. The Israel authorities prohibited Palestinian work in Israeli since the eruption of the Intifada. Several incidents of murder took place at Israeli military checkpoints. There are also children who work in vegetable markets where they are required to carry heavy loads in tough weather conditions. There are also children who are self-employed who sell newspapers, posters and other things. There are children who work in industrial zones either self-employed or as wage employees, in addition to the children who work for their families as unpaid family members or in family enterprises like farms or stores. Lately, (during Al Aqsa Intifada new but very dangerous work opportunities have arisen for children. That is after the Israeli closure of the Palestinian cities by dumping dirt or by fences, it became impossible for vehicles to leave or enter these cities. This situation forced people to walk for more than 2 km sometimes. Hundreds of children started to operate wagons through these piles of dirt to carry passengers and loads for a trivial sum of money. The real difficulty is during the Intifada. Minimal access to medical treatment results in the spread of diseases that threatens and endangers child growth.

Child labor is part of a more comprehensive phenomenon related to the structure of the Palestinian labor market, which is based on the economical dependence that has been created by the Israeli occupation since the 1940s through the absolute control of passages, borders, and the local economy. Therefore the crisis

directly and quickly affected the economy in general. All indications, statistics, and reports stress that the Israeli measures against the Palestinian people are causing wide scale and drastic damages to the Palestinian people. For instance, prohibition of Palestinian workers from working in Israel or settlements resulted in increasing unemployment and poverty rates and malnutrition among children. Per capita income is dropping at an alarming pace. Figure 1 shows the strong relationship between the number of closure days (the days of closure prevent workers from attending their work in Israel) and unemployment & per capita income levels. This result constitutes an obvious indication of the economical dependence created over decades. It is also an indication of the policy adopted by all Israeli governments to starve Palestinians. The special situation of the PT complicates the question of establishing policies at the macroeconomic level because it has been mainly hindered by the political situation. For instance, it will not be possible to control the number of closure days by establishing a policy at the macroeconomic level. In fact it needs a political solution that results in putting an end to the illegal Israeli occupation of the PT. In this case it becomes possible to treat any economical or social crisis by establishing fiscal or monetary policies or other policies at the macroeconomic level. But at present, it is impossible to wait for such a solution. Therefore, it is necessary to find immediate and urgent alternatives to treat the problems of the Palestinian labor market through which, in particular, the child labor phenomenon addressed. Several emergency committees were established to suggest treatments for different problems like unemployment and poverty. These committees must concentrate on the children, their education, and the phenomenon of their labor.

To scrutinize the determinants of the phenomenon of child labor and education and the effect of the Israeli measures, I used the sequential probit model.

The results identify some key factors which affect the household's decision to supply child labor or to send their children to school: the age and the gender of the child, the gender of the head of the household, the education and employment status of the head of the household and the mother, the characteristics of the household as the household density and the number of unemployed adults in the same household, and the geographical and type of residential location. The Intifada significantly affected some of the determinants of the child labor. These determinants were education and employment status of the head of the household and the mother, the number of unemployed adults in the same household and the region (West Bank and Gaza Strip).

A big gap between boys and girls appeared in each stage of the analysis. The girls are more likely to attend school. The probability of them staying at home without engaging in any work increases sharply. This is due to the home care tasks that they are be engaged in. The analysis showed an increase in the probability of younger children joining the labor market during the crisis. In the Intifada, the probability of girls to stay in school decreased. These results require attention to be given to both boys and girls to maintain their education through improving schooling conditions. As mentioned above, school conditions were among the important reasons for students to leave schools. Establishing a policy in the schools that can develop educational conditions can improve this situation. There is also an urgent need for psychologists and social researchers to be present in schools to help the children who have been affected psychologically by the intifada. These researchers can explain the importance of the educational stage through which these children are passing. Also, there is an urgent need to clarify to parents the importance of the psychological effects of the intifada on their children. The activation of the parent's committees at schools is as important.

The characteristics of the father and mother of the household have a strong effect on the children's education and work. Mother's work negatively but indirectly affects the children's education. This appears through the effect of the household enterprises on child education. "The presence of household enterprises as an in-house source of employment for children is a double-edged sword. On the one hand, the direct effect is to increase greatly the odds of a child working, but the increased income of the enterprise reduces the odds of the child labor" (Grootaert, 1998, p68).

The current Palestinian labor law indirectly allows child labor within the household frame. But it did not take in consideration the negative effect on the education of the children who work in their household enterprises. Therefore, this matter must be taken in consideration through the passing of laws that prohibit child labor in the household enterprises. That is if such work affects the children's education.

The educational level of the father or mother of the household has a positive effect in all cases. Higher education levels of parents reduce the probability of children leaving school and entering the labor market. But it will not be possible to control the education of the father/head of the household or mother on the short run. Promoting education levels come through promoting the level of education for the new generation. This way education levels can be improved on the long run.

Concerned institutions should introduce laws that enforce improved abidance to compulsory education. Vocational education and training requires more attention. Similarly, alternative educational institutions should be established to address the needs of vulnerable students. The reduction of the education cost needs serious consideration. Flexible schooling hours (shifts) must be established to enable the older children to work and hence secure an income for their families (poor families). This can be obtained by shortening the summer holiday,

especially that the attendance hours in several areas are very short because of the curfew.

All of these determinants had an effect identical to that of poverty. For instance, the size of the household has a negative impact on poverty as compared to the educational attainment level of the head of the household. This is a clear indication of the strong relationship between poverty and child labor.

Throughout the crisis, child education in the Gaza Strip underwent severe deterioration. Urgent mechanisms to address child drop-out levels are of utmost importance. The collapse of education in rural areas emphasizes the fact that the increase in household enterprise activity aggravates school drop-out levels. Thus, the analysis emphasizes the positive effect of the nominal cost of education for the students who live in the refugee camps despite poverty.

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Figure 1: Days of Closure, Per Capita Income and Unemployment Rate in the PT: 1994-2001
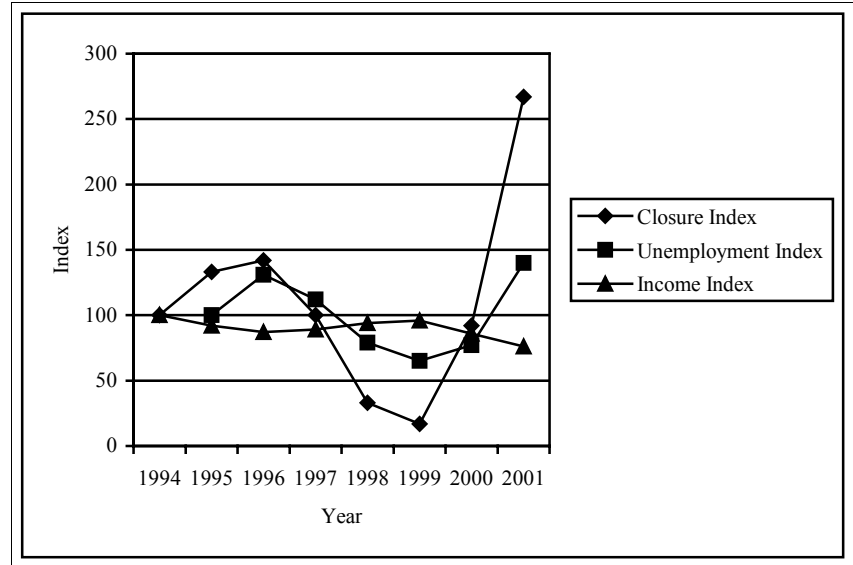
Table 1: Definition of explanatory variables used in the models

Variable name	Descriptive
Child characteristics	
Sex*	Gender (female =1, male = 0)
sex_int*	Gender × *Intifada*
age	Age of child
age_int	Age of child × *Intifada*
Parent characteristics	
sex_hh*	Gender of the head of the household (female = 1, male = 0)
sexh_int*	Gender of the head of the household × *Intifada*
age_hh	Age of the head of the household
ageh_int	Age of the head of the household × *Intifada*
yschl_hh	Years of schooling of the head
yrsh_int	Years of schooling of the head × *Intifada*
hh_emply*	Employment status of the head (employed = 1, other = 0)
emph_int*	Employment status of the head × *Intifada*
moth_sch	Years of schooling of the mother
yrsm_int	Years of schooling of the mother × *Intifada*
moth_emp*	Employment status of the mother (employed = 1, other = 0)
empm_int*	Employment status of the mother × *Intifada*
un_adult	Number of adult unemployed in the household
unem_int	Number of adult unemployed in the household × *Intifada*
hdinsity	Household density
dins_int	Household density × *Intifada*
ch0010no	Number of children aged 0 to 10 years in the household
Ch1117no	Number of children aged 11 to 17 years in the household
Locality type	
rural*	Rural =1, other = 0
rurl_int*	(Rural =1, other = 0) × *Intifada*
camp*	Refugee camp =1, other = 0
camp_int*	(Refugee camp =1, other = 0) × *Intifada*
Region	
gs*	Gaza Strip =1, other = 0
gs_int*	(Gaza Strip =1, other = 0) × *Intifada*

Notes: Intifada = 1 if the period through the crises, Intifada = 0 if the period before the crises
* : the variable is a dummy variable

Table 2: Sequential Probit Results in the PT

Variables	School Only				School and Work				Work Only			
	dF/dx (%)	t-s	Std. Err.		dF/dx (%)	t-s	Std. Err.		dF/dx (%)	t-s	Std. Err.	
sex	4.903	*	0.0037		-9.859	*	0.0099		-55.561	*	0.0182	
sex_int	-1.297	*	0.0056		-0.721		0.0184		-1.271		0.0428	
age	-3.756	*	0.0008		-1.484	*	0.0020		9.512	*	0.0063	
age_int	0.118	**	0.0010		0.422	**	0.0026		-0.140		0.0069	
sex_hh	0.519		0.0076		3.494	**	0.0242		-2.786		0.0430	
sexh_int	-0.115		0.0115		3.898	**	0.0418		2.765		0.0735	
age_hh	0.171	*	0.0002		0.237	*	0.0005		-0.096		0.0013	
ageh_int	0.006		0.0003		-0.193	*	0.0007		-0.117		0.0017	
yschl_hh	0.561	*	0.0005		0.576	*	0.0011		-0.890	*	0.0033	
yrsh_int	-0.113	**	0.0008		-0.052		0.0019		0.590		0.0048	
hh_emply	0.295		0.0048		3.642	*	0.0096		3.527	**	0.0265	
emph_int	0.349		0.0063		-1.226		0.0155		5.914	**	0.0416	
moth_sch	0.525	*	0.0005		0.245	*	0.0011		-0.101	**	0.0035	
yrsm_int	0.142	**	0.0008		0.017		0.0020		-1.164	*	0.0050	
moth_emp	-4.135	*	0.0062		9.090	*	0.0164		17.727	*	0.0367	
empm_int	1.249	**	0.0067		1.910	**	0.0195		4.405		0.0523	
un_adult	0.096		0.0043		-2.125	**	0.0116		-7.704	*	0.0254	
unem_int	-0.434		0.0052		-0.382		0.0165		8.952	*	0.0310	
hdinsity	-0.365	*	0.0014		-0.545	**	0.0031		-0.693		0.0086	
dins_int	0.014		0.0020		-0.208		0.0053		0.050		0.0122	
ch0010no	-0.241	*	0.0009		-0.189		0.0022		0.266		0.0057	
ch1117no	-0.006	*	0.0000		0.012	*	0.0000		0.003		0.0001	
rural	-0.481	**	0.0044		2.930	*	0.0100		0.955		0.0270	
rurl_int	0.689	**	0.0059		0.166		0.0158		-0.928		0.0380	
camp	-1.168	*	0.0055		0.295		0.0119		-6.332	*	0.0276	
camp_int	-0.208		0.0073		-0.522		0.0188		2.394		0.0461	
gs	1.059	*	0.0041		-4.155	*	0.0081		-7.114	*	0.0242	
gs_int	-1.393	*	0.0066		3.303	**	0.0226		-4.671	**	0.0341	
Log Likelihood	-10319				-1070				-1395			
Number of observation	35903				4193				3689			
LR chi sq. (28)	5530				856				1952			
Prob > Chi sq.	0.0000				0.0000				0.0000			
Pseudo R sq.	0.2113				0.2858				0.4116			

Notes: * Significant at 5 percent
** Significant at 10 percent

Table 3: The Main Characteristics of Children (10-17 years) in the PT: 2000-2001

Category	Q2-2000	Q3-2000	Q4-2000	Q2-2001	Q3-2001
West Bank					
By Gender:					
Male	50.9	50.1	50.2	50.9	51.8
Female	49.1	49.9	49.8	49.1	48.2
By Age Group:					
10 to 14 years	65.1	64.5	63.8	65.4	67.9
15 to 17 years	34.9	35.5	36.2	34.6	32.1
By Locality Type:					
Urban	51.5	51.9	52.0	51.6	36.6
Rural	42.1	42.1	41.8	42.3	50.6
Refugee Camp	6.5	6.0	6.2	6.1	12.8
By School Attendance:					
Attendance	89.5	88.9	88.6	90.7	91.3
Not Attendance	10.5	11.1	11.4	9.3	8.7
By Employment Status:					
Employment	6.0	7.5	3.6	3.4	2.9
Unemployment	0.6	0.5	1.9	1.1	1.1
Outside of LF	93.4	92.0	94.5	95.5	96.0
Gaza Strip					
By Gender:					
Male	50.1	49.5	49.4	49.7	51.4
Female	49.9	50.5	50.6	50.3	48.6
By Age Group:					
10 to 14 years	65.8	66.0	65.6	64.9	67.6
15 to 17 years	34.2	34.0	34.4	35.1	32.4
By Locality Type:					
Urban	64.2	65.0	64.7	63.5	56.4
Rural	5.9	5.6	4.6	5.1	11.5
Refugee Camp	30.0	29.5	30.8	31.3	32.1
By School Attendance:					
Attendance	90.9	89.2	89.6	90.9	91.5
Not Attendance	9.1	10.8	10.4	9.1	8.5
By Employment Status:					
Employment	2.7	4.2	1.5	1.3	1.3
Unemployment	0.7	1.0	1.4	1.2	1.0
Outside of LF	96.6	94.8	97.2	97.5	97.7

Table 3: Cont'd.

Category	Q2-2000	Q3-2000	Q4-2000	Q2-2001	Q3-2001
Palestinian Territory					
By Gender:					
Male	50.6	49.8	49.9	50.4	51.7
Female	49.4	50.2	50.1	49.6	48.3
By Age Group:					
10 to 14 years	65.4	65.0	64.5	65.2	67.8
15 to 17 years	34.6	35.0	35.5	34.8	32.2
By Locality Type:					
Urban	56.3	56.8	56.8	56.2	45.2
Rural	28.3	28.2	27.7	27.8	33.7
Refugee Camp	15.4	14.9	15.5	15.9	21.2
By School Attendance:					
Attendance	90.0	89.1	89.0	90.8	91.4
Not Attendance	10.0	10.9	11.0	9.2	8.6
By Employment Status:					
Employment	4.7	6.3	2.8	2.6	2.2
Seeking for job	0.6	0.7	1.7	1.1	1.0
Outside of LF	94.6	93.0	95.5	96.3	96.8

Source: Palestinian Central Bureau of Statistics, 2002. Labor Force Survey Database: 2000-2001. Ramallah-Palestine.
Notes: Q: Quarter

Table 4: The Main Characteristics of Employed Children (10-17 years) in the PT: 2000-2001

Category	West Bank					Gaza Strip				
	Q2-00	Q3-00	Q4-00	Q2-01	Q3-01	Q2-00	Q3-00	Q4-00	Q2-01	Q3-01
By Gender										
Male	93.5	90.1	87.4	93.9	92.1	93.6	97.9	-	98.0	100.0
Female	6.5	9.9	12.6	6.1	7.9	6.4	2.1	-	2.0	
By Age Group:										
10 to 14 years	24.6	28.9	24.4	17.4	19.3	12.9	31.3	25.1	20.4	17.0
15 to 17 years	75.4	71.1	75.6	82.6	80.7	87.1	68.7	74.9	79.6	83.0
By Locality Type:										
Urban	45.3	41.1	47.4	48.1	35.7	78.6	74.4	73.4	64.6	55.3
Rural	49.0	52.7	46.8	45.0	52.9	3.1	4.8	0.9	12.8	27.7
Refugee Camp	5.7	6.1	5.8	6.8	11.4	18.3	20.7	25.7	22.6	17.0
By School Attendance:										
Attendance	32.2	47.5	22.3	23.9	25.7	14.0	36.5	20.9	12.9	29.8
Not Attendance	67.8	52.5	77.7	76.1	74.3	86.0	63.5	79.1	87.1	70.2
By Place of Work:										
Palestinian Territory	82.6	78.2	91.7	89.4	86.4	96.7	98.3	100.0	99.0	100.0
Israel and Settlement	17.4	21.8	8.3	10.6	13.6	3.3	1.7		1.0	0.0
By Employment Status:										
Self Employed	4.3	4.3	6.9	6.9	9.3	1.9	5.9	9.1	4.2	12.8
Wage Employees	52.1	53.5	34.2	38.3	37.9	55.3	57.6	37.5	44.2	38.3
Unpaid Family Members	43.7	42.2	58.9	54.8	52.9	42.8	36.5	53.4	51.5	48.9
By Industry:										
Agriculture	31.0	33.6	38.9	36.3	35.7	25.4	25.1	30.0	28.1	29.8
Manufacturing	17.1	18.7	14.8	20.0	18.6	26.1	25.8	15.5	31.8	12.8
Construction	22.7	20.3	12.9	13.2	16.4	16.4	13.7	2.4		6.4
Commerce-Hotels	24.7	21.7	28.0	28.6	25.7	18.2	24.9	32.1	32.9	44.7
Transport-storage	1.2	1.0	0.2		0.7	1.9	3.5	7.9	2.7	
Other	3.3	4.7	5.1	2.0	2.9	12.0	7.0	12.1	4.5	6.4
By Occupation:										
Services-Shop	13.8	10.8	19.9	21.8	16.4	16.9	20.1	39.6	24.9	34.0
Skilled Agriculture	23.7	28.1	37.6	32.9	32.1	12.6	21.1	23.9	21.5	17.0
Craft	23.7	20.4	14.8	10.5	8.6	34.3	33.2	11.8	38.6	21.3
Elementary Occupation	34.4	37.3	25.7	28.4	35.7	29.8	20.6	20.0	15.0	25.5
Other	4.4	3.4	1.9	6.4	7.1	6.5	5.0	4.6	0.0	2.1
Averages:										
Av. of Weekly Work Hours	40.4	41.9	37.1	40.4	40.5	39.9	38.0	38.7	39.9	39.0
Av. of Daily Wage (US$)	13.8	13.5	13.0	12.0	13.3	7.7	7.0	7.3	5.3	6.5
Head of Household Chs.										
Av. Age in years	46.5	46.8	47.7	47.5	47.3	46.3	47.2	49.8	45.3	44.3
Av. Years of Schooling	7.0	6.9	6.5	7.2	6.9	8.0	7.8	7.4	7.2	9.5
Av. Daily Wage (US$)	19.3	20.5	17.9	17.6	16.2	14.7	13.1	10.7	9.3	9.2
Household Size	9.3	9.0	9.1	9.1	8.8	9.9	9.7	9.4	9.4	9.9

Table 4: Cont'd.

Category	Palestinian Territory				
	Q2-00	Q3-00	Q4-00	Q2-01	Q3-01
By Gender					
Male	93.6	92.1	89.9	94.7	94.1
Female	6.4	7.9	10.1	5.3	5.9
By Age Group					
10 to 14 years	22.1	29.5	24.6	18.0	18.7
15 to 17 years	77.9	70.5	75.4	82.0	81.3
By Locality Type					
Urban	52.5	49.7	52.5	51.4	40.6
Rural	39.1	40.4	37.7	38.7	46.5
Refugee Camp	8.4	9.9	9.7	10.0	12.8
By School Attendance					
Attendance	28.3	44.7	22.1	21.7	26.7
Not Attendance	71.7	55.3	77.9	78.3	73.3
By Place of Work					
Palestinian Territory	85.6	83.3	93.3	91.3	89.8
Israel and Settlement	14.4	16.7	6.7	8.7	10.2
By Employment Status					
Self Employed	3.8	4.7	7.3	6.4	10.2
Wage Employees	52.8	54.5	34.9	39.4	38.0
Unpaid Family Members	43.5	40.7	57.8	54.2	51.9
By Industry					
Agriculture	29.8	31.4	37.1	34.7	34.2
Manufacturing	19.1	20.6	15.0	22.3	17.1
Construction	21.4	18.6	10.8	10.6	13.9
Commerce-Hotels	23.3	22.5	28.8	29.4	30.5
Transport-storage	1.3	1.7	1.7	0.5	0.5
Other	5.2	5.3	6.5	2.5	3.7
By Occupation					
Services-Shop	14.5	13.2	23.8	22.4	20.9
Skilled Agriculture	21.3	26.3	34.9	30.7	28.3
Craft	26.0	23.7	14.2	16.0	11.8
Elementary Occupation	33.4	33.0	24.6	25.7	33.2
Other	4.8	3.8	2.5	5.2	5.9
Average					
Av. of Weekly Work Hours	40.3	40.9	37.4	40.3	40.1
Av. of Daily Wage (US$)	12.3	11.8	11.7	10.5	11.6
Head of Household Chs.					
Av. Age in years	46.5	46.9	48.1	47.1	46.5
Av. Years of Schooling	7.2	7.1	6.7	7.2	7.6
Av. Daily Wage (US$)	18.3	18.8	16.3	16.4	14.5
Household Size	9.4	9.2	9.1	9.1	9.0

Source: Palestinian Central Bureau of Statistics, 2002. Labor Force Survey Database: 2000-2001. Ramallah-Palestine

Table 5: The Main Characteristics of Children (10-17 years) in the PT By Labor and School Status: 2000-2001

Category	1	2	3	4	Total	1	2	3	4	Total	1	2	3	4	Total
	Second Quarter of 2000					Third Quarter of 2000					Fourth Quarter of 2000				
By Gender:															
Male	89.4	2.5	8.0	0.2	100	86.3	5.5	8.1	0.1	100	91.0	1.2	7.8	0.1	100
Female	92.9	0.3	0.3	6.5	100	91.2	0.6	0.5	7.7	100	91.7	0.1	0.4	7.7	100
By Age Group:															
10 to 14 years	97.7	1.0	0.6	0.7	100	96.4	2.1	0.9	0.6	100	97.9	0.6	0.7	0.8	100
15 to 17 years	78.4	2.1	11.0	8.5	100	74.1	4.7	10.7	10.5	100	78.9	0.8	10.3	10.0	100
By School Att.:															
Attendance	98.5	1.5	_	_	100	96.7	3.26	_	_	100	99.3	0.7	_	_	100
Not Attendance	_	_	55.4	44.6	100	_	_	51.4	48.6	100	_	_	50.3	49.7	100
Head of Hhold is:															
Male	91.3	1.4	4.0	3.3	100	89.0	3.0	4.2	3.8	100	91.7	0.6	3.9	3.8	100
Female	87.7	1.3	6.3	4.7	100	85.5	2.9	4.9	6.6	100	85.0	0.9	7.0	7.1	100
Labor Status															
In Labour Force	91.6	1.5	3.9	3.0	100	85.5	1.5	6.0	6.9	100	90.6	0.3	4.1	5.0	100
Outside LF	88.9	0.6	5.5	5.0	100	89.5	3.3	3.8	3.3	100	91.6	0.8	4.0	3.6	100
Refugee Status															
Non Refugee	90.8	1.8	4.5	3.0	100	88.4	3.7	4.3	3.6	100	91.5	0.9	4.0	3.6	100
Refugee	91.6	0.8	3.7	3.9	100	89.3	1.9	4.2	4.6	100	91.1	0.3	4.0	4.6	100
By Locality Type:															
Urban	92.3	1.0	4.1	2.6	100	89.8	2.4	4.0	3.7	100	91.8	0.5	4.0	3.8	100
Rural	88.0	2.6	5.0	4.4	100	85.9	4.8	4.9	4.4	100	89.8	1.3	4.7	4.1	100
Refugee Camp	92.5	0.5	2.8	4.1	100	90.3	1.6	3.7	4.4	100	92.5	0.2	2.8	4.5	100
By Region:															
West Bank	89.7	2.0	4.8	3.5	100	87.5	3.7	4.6	4.2	100	90.1	0.8	4.9	4.2	100
Gaza Strip	93.5	0.4	3.1	3.0	100	90.9	1.8	3.6	3.7	100	93.5	0.4	2.6	3.6	100
By Area:															
North West Bank	86.5	4.4	5.3	3.8	100	83.3	8.1	4.9	3.7	100	88.0	1.8	6.2	4.0	100
Mid. West Bank	92.9	0.4	3.3	3.4	100	90.4	0.2	3.8	5.6	100	90.7	_	4.1	5.3	100
South West Bank	90.1	0.7	5.7	3.4	100	89.7	2.1	5.0	3.2	100	92.2	0.4	4.0	3.3	100
PT Excl. Jerusalem	90.7	1.5	4.4	3.4	100	88.6	3.4	4.3	3.7	100	91.5	0.8	4.1	3.6	100
Jerusalem Gover.	94.0	0.3	2.5	3.2	100	90.1	_	3.6	6.3	100	90.2	_	3.5	6.3	100
Total	91.1	1.4	4.2	3.3	100	88.8	3.0	4.2	4.0	100	91.3	0.7	4.0	4.0	100

Table 5: Cont'd.

Category	1	2	3	4	Total	1	2	3	4	Total
	Second Quarter of 2001					Third Quarter of 2001				
By Gender:										
Male	92.4	1.1	6.4	0.0	100	93.5	1.3	5.1	0.2	100
Female	93.8	0.1	0.3	5.9	100	93.7	0.0	0.3	6.0	100
By Age Group:										
10 to 14 years	98.7	0.4	0.5	0.5	100	98.8	0.4	0.2	0.5	100
15 to 17 years	81.2	1.1	9.5	8.2	100	82.3	1.2	8.0	8.5	100
By School Att.:										
Attendance	99.3	0.7	_	_	100	99.3	0.7	_	_	100
Not Attendance	_	_	53.2	46.8	100	_	_	47.2	52.8	100
Head of Hhold is:										
Male	93.2	0.6	3.3	2.9	100	93.9	0.6	2.7	2.8	100
Female	91.1	0.7	3.6	4.6	100	88.5	1.3	3.6	6.6	100
Labor Status										
In Labour Force	91.2	0.5	3.5	4.8	100	92.4	0.4	2.5	4.7	100
Outside LF	93.6	0.7	3.3	2.4	100	94.0	0.7	2.8	2.5	100
Refugee Status										
Non Refugee	92.9	0.9	3.6	2.6	100	93.5	0.9	3.0	2.7	100
Refugee	93.3	0.3	3.0	3.3	100	93.8	0.4	2.4	3.4	100
By Locality Type:										
Urban	94.5	0.3	3.0	2.2	100	94.1	0.5	2.5	2.9	100
Rural	91.4	1.1	4.0	3.5	100	92.5	1.0	3.2	3.3	100
Refugee Camp	92.9	0.4	3.0	3.6	100	94.4	0.4	2.3	2.9	100
By Region:										
West Bank	91.8	0.9	4.1	3.2	100	92.7	0.8	3.3	3.1	100
Gaza Strip	95.0	0.2	2.2	2.6	100	94.8	0.5	1.9	2.9	100
By Area:										
North West Bank	90.6	1.9	4.7	2.8	100	92.3	1.8	3.3	2.6	100
Mid. West Bank	91.3	0.6	3.8	4.2	100	91.8	0.4	3.6	4.1	100
South West Bank	93.3	0.1	3.8	2.8	100	94.0	0.2	3.0	2.8	100
PT Excl. Jerusalem	93.1	0.7	3.3	2.9	100	93.8	0.7	2.6	2.9	100
Jerusalem Gover.	92.9	0.1	3.4	3.5	100	91.7	0.3	4.0	4.0	100
Total	93.1	0.6	3.4	2.9	100	93.6	0.7	2.7	3.0	100

Notes: 1=Go to school only 2=go to school and work 3=work only 4=other include housekeeper and idle

Source: Palestinian Central Bureau of Statistics, 2002. Labor Force Survey Database: 2000-2001. Ramallah-Palestine.

Table 6: The Children Dynamism in the Labor Market Between Third Quarter of 2000 and 2001 in the PT

Third Quarter 2000	Third Quarter 2001					
	School Only	School & Work	Work Only	Housekeeper	Other	Total
School Only	87.3	0.2	0.4	0.9	0.9	89.7
School & Work	1.6	0.4	0.1	_		2.1
Work Only	0.1	0.1	1.7	_	0.9	2.8
Housekeeper	0.1	_		1.5	0.2	1.8
Other	1.3	_	0.5	0.2	1.7	3.6
Total	90.4	0.6	2.8	2.5	3.7	100

Source: Palestinian Central Bureau of Statistics, 2002. Labor Force Survey Database: 2000-2001. Ramallah-Palestine.

Table 7: The Basic Changes in the Labor Force (15 years and over) Indicators in PT: 2000-2001

Indicators	Q1-00	Q2-00	Q3-00	Q4-00	Q1-01	Q2-01	Q3-01
West Bank							
Labour Force Participation Rate	42.1	43.9	45.3	42.9	41.6	41.1	41.4
Full Employment Rate	86.8	86.4	84.8	68.1	71.6	75.8	72.1
Underemployment Rate	4.3	7.1	7.7	5.6	4.5	5.2	5.2
Unemployment Rate	8.9	6.5	7.5	26.3	23.9	19.0	22.7
Employed in Agriculture	10.7	12.1	11.3	17.1	11.7	12.9	12.0
Employed in Construction	24.3	25.0	24.2	13.3	17.6	18.6	18.3
Employed in Manufacturing	15.4	15.3	16.1	14.6	16.9	15.4	14.4
Employed in Services	24.9	24.0	24.6	29.0	28.0	26.6	29.3
Elementary Occupation Workers	30.2	20.8	20.5	15.2	17.8	17.8	18.0
Craft and Related Trade Workers	23.5	24.3	25.7	18.2	20.9	21.6	20.0
Employed in Israel & Settlements	25.3	25.2	24.8	11.3	19.1	18.7	16.1
Self - Employed	19.6	19.3	19.9	24.6	22.9	25.3	26.1
Wage Employees	66.8	66.9	66.2	57.0	62.6	59.6	60.2
Unpaid Family Members	7.6	8.8	9.3	13.6	9.3	10.2	10.0
Gaza Strip							
Labour Force Participation Rate	38.2	39.5	40.1	32.0	33.4	33.1	32.1
Full Employment Rate	83.2	84.6	81.0	63.7	63.4	63.0	66.5
Underemployment Rate	1.5	1.6	3.5	2.8	2.5	2.1	1.6
Unemployment Rate	15.3	13.8	15.5	33.5	34.1	34.9	31.9
Employed in Agriculture	16.9	16.6	16.2	16.1	13.3	11.0	9.6
Employed in Construction	14.7	16.0	15.9	3.5	2.4	3.9	6.0
Employed in Manufacturing	12.1	12.5	12.3	7.5	9.4	10.0	10.0
Employed in Services	38.5	38.8	38.0	53.7	54.8	54.1	53.0
Elementary Occupation Workers	24.7	19.1	18.0	9.9	10.7	11.7	10.9
Craft and Related Trade Workers	19.7	20.2	21.7	10.5	13.0	13.3	15.2
Employed in Israel & Settlements	14.1	15.3	15.4	2.7	2.0	1.6	2.2
Self - Employed	20.0	17.1	13.6	18.7	17.7	18.5	19.6
Wage Employees	68.8	70.9	71.0	65.9	68.3	68.2	68.2
Unpaid Family Members	8.1	9.7	11.4	11.4	10.3	6.8	6.3

Table 7: Cont'd

Indicators	Q1-00	Q2-00	Q3-00	Q4-00	Q1-01	Q2-01	Q3-01
Palestinian Territories							
Labour Force Participation Rate	40.8	42.5	43.5	39.2	38.8	38.3	38.3
Full Employment Rate	85.7	85.8	83.6	66.9	69.2	72.0	70.5
Underemployment Rate	3.4	5.4	6.4	4.8	3.9	4.3	4.2
Unemployment Rate	10.9	8.8	10.0	28.3	26.9	23.7	25.3
Employed in Agriculture	12.6	13.4	12.7	16.9	12.1	12.4	11.4
Employed in Construction	21.4	22.3	21.7	10.8	13.6	14.9	15.1
Employed in Manufacturing	14.4	14.4	15.0	12.8	14.9	14.0	13.3
Employed in Services	29.0	28.6	28.6	35.2	35.1	33.6	35.5
Elementary Occupation Workers	28.6	20.4	19.8	13.7	15.9	16.2	16.1
Craft and Related Trade Workers	22.3	23.1	24.5	16.2	18.8	19.5	18.7
Employed in Israel & Settlements	21.9	22.3	22.1	9.1	14.6	14.4	12.5
Self - Employed	19.7	18.7	18.1	23.1	21.6	23.6	24.4
Wage Employees	67.4	68.1	67.6	59.3	64.1	61.8	62.3
Unpaid Family Members	7.8	9.0	9.9	13.0	9.5	9.3	9.0

Source: Palestinian Central Bureau of Statistics, 2002. Labor Force Survey Database: 2000-2001. Ramallah-Palestine.

Appendix: The Probit Model

In this class of models, the dependent variable y, takes on only two values (y is a dummy variable representing a choice between two alternatives). In this paper there are three dependent variables, as follows:

P_1 = 1 if the children go to school and not to work
   0 other
P_2 = 1 if the children go to school and to work
   0 other
P_3 = 1 if the children go to school and are economically active
   0 other

The goal is to quantify the relationship between the individual characteristics and the probability of their decision.

The Theory

Suppose that a binary dependent variable, y, takes on values of zero and one. A simple linear regression of y on x is not appropriate, since among other things, the implied model of the conditional mean places inappropriate restrictions on the residuals of the model. Furthermore, the fitted value of y from a simple linear regression is not restricted to lie between zero and one. Instead, we adopt a specification that is designed to handle the specific requirements of binary dependent variables. Suppose that we model the probability of observing a value of one as:

$$\Pr\left(y_i = 1 \middle| \beta, x_i\right) = 1 - F\left(-\beta' x_i\right)$$

Where x_i is the explanatory variables, β is a coefficient and F is a continuous function, strictly increasing function that takes a real value and returns a value ranging from zero to one. The choice of the function F determines the type of binary model. It follows that

$$\Pr\left(y_i = 0 \middle| \beta, x_i\right) = F\left(-\beta' x_i\right)$$

Given such a specification, we can estimate the parameters of this model using the method of maximum likelihood. For the probit model, the likelihood function is

$$L = \prod_{i=1}^{n} \left[F\left(\beta' x_i\right)\right]^{y_i} \left[1 - F\left(\beta' x_i\right)\right]^{1-y_i}$$

where $F(.)$ is the cumulative distribution function of the standard normal distribution.

And the log-likelihood is given by:

$$\ell(\beta) = \log L(\beta) = \sum_{i=1}^{n} y_i \log F\left(\beta' x_i\right) + \sum_{i=1}^{n} \left(1 - y_i\right) \log\left[1 - F\left(\beta' x_i\right)\right]$$

The first order conditions for this likelihood are nonlinear so that obtaining parameter estimates requires an iterative solution. In this paper, we use a second derivative method for iteration and computation of the covariance matrix of the parameter estimates.

For the probit model, the error term is

$$\Pr\left(y_i^{\cdot} = 1 \middle| \beta, x_i\right) = 1 - F\left(-\beta x'_i\right) = f\left(\beta x'_i\right)$$

The Results Interpretation

Interpretation of the coefficient values is complicated by the fact that estimated coefficients from a binary model cannot be interpreted as the marginal effect on the dependent variable. The marginal effect of x_i on the conditional probability is given by:

$$\frac{\partial F\left(y \middle| \beta x\right)}{\partial x_j} = f\left(-\beta x\right)\beta_j$$

where $f(x) = dF(x)/dx$ is the density function associated with F. Note that β_j is weighted by a factor f that depends on the values of all of the regressors in x.

Note also that since the density function is nonnegative, the direction of the effect of a change in x_i depends only on the sign of the β_j coefficient. Positive values of β_j imply that increasing x_i will increase the probability of the response; negative values imply the opposite. For more details see (Maddala,1983, ch.2)